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fields growing other crops (primarily cotton), since this entails a thorough turning over of the soil which crop rotation alone would not accomplish. When the exchange is completed, the new surfaces are then overlaid with an average per acre of 70 tons of mud dug from the canals. Maintenance of navigability in the canals is a communal responsibility, and farmers are recompensed for their dredging labor by using the highly fertile calcareous mud (which as a rule has supported a heavy growth of water weeds as well as ultimately receiving considerable farm and village waste), also by making use of the canals to market their production and receive goods from outside.[4]

The farms are small, 93 per cent of them under 50 *mow* and 25 per cent under 5 *mow*, with an average size of 34 *mow*, according to a Chinese statistical study[5] (one *mow* equals approximately one sixth of an acre). Their cultivation is better described as gardening than as farming. Tools in general use are limited to the *t'u t'ou* (earth head)—a large-bladed hoe—and smaller metal-headed rakes, hoes, and mattocks, all designed for painstaking hand labor. Water is transferred from the canals to fields for irrigation by means of endless chains of small buckets mounted on inclined frames and driven by foot treadles.[6] The average number of total animal units per farm is lower in this area, according to Buck, than anywhere else in China.[7] This is due to the small size of the farms, and to the abundance of human labor, which cannot afford to allocate feed for animals in return for the labor, meat, and manure which they produce. Manual gardening gives a greater return than animal husbandry or farming with draft animals from this fertile and repeatedly refertilized soil in proportion to the food it consumes, and permits a population of 40 million people in the fertile triangle.

With such intensive cultivation, crop yields in the fertile triangle are among the highest in China. Buck's samplings show both rice and wheat yields in this area consistently among the upper five per cent of rice and wheat yields for the 161 localities in China covered by his study.[8] Within a thirty-mile radius of Shanghai, where the city's night soil is cheaper and more readily available than in outlying districts (see below, pp. 162–64), yields of all crops are exceeded by only two counties in China (both near Canton)